WHAT IS CLAIMED IS:

1. A light emitting device comprising:

a light emitting layer portion composed of a compound semiconductor, and has a double heterostructure in which a first-conductivity-type cladding layer, an active layer and a second-conductivity-type cladding layer are stacked in this order; and

an oxide transparent electrode layer covering the main surface of the second-conductivity-type cladding layer, and being provided for applying therethrough emission drive voltage to the light emitting layer portion;

further comprising:

a bonding pad composed of a metal and disposed on the oxide transparent electrode layer, and having an electrode wire for current supply bonded thereto; and

a cushion layer disposed between the second-conductivity-type cladding layer and the oxide transparent electrode layer, and comprising a compound semiconductor layer having a dopant concentration lower than that of the second-conductivity-type cladding layer.

2. The light emitting device as claimed in Claim 1, wherein the thickness of the cushion layer is 0.1 μm to 5 μm, both ends inclusive.

3. The light emitting device as claimed in Claim 1, wherein a total thickness of the cushion layer and the second-conductivity-type cladding layer is 0.6 μm or above.

4. The light emitting device as claimed in Claim 1, further comprising an electrode contact layer for reducing junction resistance of the oxide transparent electrode layer, disposed between the cushion layer and the oxide transparent electrode layer so as to contact with the oxide transparent electrode layer;

the electrode contact layer being formed with an ratio of formation area smaller in a primary region which locates right under the bonding pad, than in a secondary region surrounding the primary region.

5. The light emitting device as claimed in Claim 4, wherein the primary region has no electrode contact layer formed therein.

6. The light emitting device as claimed in Claim 1, wherein

the oxide transparent electrode layer is an ITO electrode layer, and between the cushion layer and the ITO electrode layer, an electrode contact layer for reducing junction resistance of the ITO electrode layer is disposed so as to contact with the ITO electrode layer; and

the cushion layer comprises a phosphorus-containing compound semiconductor layer containing phosphorus, and between the cushion layer and the electrode contact layer, a phosphorus-blocking layer having a band gap energy larger than that of the electrode contact layer, and having a phosphorus content lower than that of the phosphorus-containing compound semiconductor layer is disposed.

7. The light emitting device as claimed in Claim 6, wherein the phosphorus-blocking layer is composed of a phosphorus-free compound semiconductor.

8. The light emitting device as claimed in Claim 7, wherein the phosphorus-blocking layer is composed of AlGaAs.

9. The light emitting device as claimed in Claim 6, wherein the phosphorus-blocking layer comprises an intermediate layer having a band gap energy smaller than that of the phosphorus-containing compound semiconductor composing the cushion layer, and larger than that of the electrode contact layer.

10. The light emitting device as claimed in Claim 9, wherein the cushion layer is composed of GaP, the phosphorus-blocking layer is composed of AlGaAs, and the electrode contact layer is composed of In-containing GaAs.

11. The light emitting device as claimed in Claim 1, wherein

the oxide transparent electrode layer is an ITO electrode layer, and between the cushion layer and the ITO electrode layer, an electrode contact layer for reducing junction resistance of the ITO electrode layer is disposed so as to contact with the ITO electrode layer; and

the second-conductivity-type cladding layer is configured as a phosphorus-containing compound semiconductor layer containing

phosphorus; and

the cushion layer is configured as a phosphorus-blocking layer having a band gap energy larger than that of the electrode contact layer, and having a phosphorus content lower than that of the phosphorus-containing compound semiconductor layer.

12. The light emitting device as claimed in Claim 11, wherein the cushion layer configured as the phosphorus-blocking layer is composed of a phosphorus-free compound semiconductor.

13. The light emitting device as claimed in Claim 12, wherein the cushion layer configured as the phosphorus-blocking layer is composed of AlGaAs.

14. A method of fabricating a light emitting device which comprises a light emitting layer portion composed of a compound semiconductor, and has a double heterostructure in which a first-conductivity-type cladding layer, an active layer and a second-conductivity-type cladding layer are stacked in this order; and an oxide transparent electrode layer covering the main surface of the second-conductivity-type cladding layer, and provided for applying therethrough emission drive voltage to the light emitting layer portion; comprising the steps of:

forming a cushion layer on the second-conductivity-type cladding layer of the light emitting layer portion, the cushion layer comprising a

compound semiconductor layer having a dopant concentration lower than that of the second-conductivity-type cladding layer;

forming the oxide transparent electrode layer so as to cover the cushion layer;

forming a bonding pad composed of a metal on the oxide transparent electrode layer; and

bonding an electrode wire for current supply to the bonding pad;

where these steps are sequentially carried out in this order.

15. The method of fabricating a light emitting device as claimed in Claim 14, wherein the cushion layer is formed to a thickness of the 0.1 μm to 5 μm, both ends inclusive.

16. A light emitting device comprising:

a light emitting layer portion composed of a compound semiconductor, and has a double heterostructure in which a first-conductivity-type cladding layer, an active layer and a second-conductivity-type cladding layer are stacked in this order; and

an oxide transparent electrode layer covering the main surface of the second-conductivity-type cladding layer, and being provided for applying therethrough emission drive voltage to the light emitting layer portion;

further comprising:

a bonding pad composed of a metal and is disposed on the oxide transparent electrode layer, and having an electrode wire for current

supply bonded thereto; and

an electrode contact layer composed of a compound semiconductor, provided for reducing junction resistance of the oxide transparent electrode layer, and disposed so as to contact with the oxide transparent electrode layer;

wherein a bonding-side semiconductor layer, which is defined as a compound semiconductor layer including the second-conductivity-type cladding layer disposed between the active layer and the electrode contact layer, has a dopant concentration of $4\times10^{16}/cm^3$ or above and less than $1\times10^{18}/cm^3$, and has a thickness of 0.6 μm or above and less than 10 μm.

17. The light emitting device as claimed in Claim 16, wherein the bonding-side semiconductor layer comprises the second-conductivity-type cladding layer, and a cushion layer disposed so as to contact with the oxide transparent electrode layer side of the second-conductivity-type cladding layer, and being composed of a compound semiconductor having a dopant concentration lower than that of the second-conductivity-type cladding layer.

18. The light emitting device as claimed in Claim 16, wherein the cushion layer has a thickness of 0.1 μm to 5 μm, both ends inclusive.

19. The light emitting device as claimed in Claim 16, wherein the bonding-side semiconductor layer comprises the

second-conductivity-type cladding layer having a thickness of 0.6 μm or above and less than 10 μm.

20. The light emitting device as claimed in Claim 19, wherein the first-conductivity-type cladding layer is formed thinner than the second-conductivity-type cladding layer.

21. The light emitting device as claimed in Claim 16, wherein the oxide transparent electrode layer is an ITO electrode layer, and the electrode contact layer has a composition of $In_xGa_{1-x}As$ ($0<x\leqq 1$) at the junction interface with the ITO electrode layer.

22. The light emitting device as claimed in Claim 16, wherein the electrode contact layer has an In concentration profile in the thickness-wise direction thereof continuously decreasing as receding from the ITO electrode layer.

23. The light emitting device as claimed in Claim 16, wherein the electrode contact layer is composed of a semiconductor having a band gap energy smaller than that of the portion of the bonding-side semiconductor layer in contact therewith, and has a dopant concentration set higher than that of the portion of the bonding-side semiconductor layer.

24. The light emitting device as claimed in Claim 16, wherein

the electrode contact layer has a dopant concentration equal to or lower than that of the bonding-side semiconductor layer.

25. The light emitting device as claimed in Claim 16, wherein the electrode contact layer is formed with an ratio of formation area smaller in a primary region which locates right under the bonding pad, than in a secondary region surrounding the primary region.

26. The light emitting device as claimed in Claim 25, wherein the primary region has no electrode contact layer formed therein.

27. The light emitting device as claimed in Claim 16, wherein the oxide transparent electrode layer is an ITO layer; and

the bonding-side semiconductor layer comprises a first layer including at least an interface with the electrode contact layer and a second layer located between the first layer and the active layer; a portion of the second layer including at least the interface with the first layer being configured as a phosphorus-containing compound semiconductor layer containing phosphorus; and the first layer being configured as a phosphorus-blocking layer having a band gap energy larger than that of the electrode contact layer, and a phosphorus content lower than that of the phosphorus-containing compound semiconductor layer.

28. A light emitting device comprising:

a light emitting layer portion composed of a compound semiconductor, and has a double heterostructure in which a first-conductivity-type cladding layer, an active layer and a second-conductivity-type cladding layer are stacked in this order; and

an ITO electrode layer covering the main surface of the second-conductivity-type cladding layer, and being provided for applying therethrough emission drive voltage to the light emitting layer portion;

further comprising:

a bonding pad composed of a metal and is disposed on the ITO electrode layer, and having an electrode wire for current supply bonded thereto;

an electrode contact layer composed of a compound semiconductor, provided for reducing junction resistance of the ITO electrode layer, and disposed so as to contact with the ITO electrode layer;

wherein a bonding-side semiconductor layer, which is defined as a compound semiconductor layer including the second-conductivity-type cladding layer disposed between the active layer and the electrode contact layer, has a thickness of 0.6 μm or above and less than 10 μm; comprises a first layer including at least an interface with the electrode contact layer and a second layer located between the first layer and the active layer; a portion of the second layer including at least the interface with the first layer being configured as a phosphorus-containing compound semiconductor layer containing phosphorus; and the first layer being configured as a phosphorus-blocking layer having a band

gap energy larger than that of the electrode contact layer, and a phosphorus content lower than that of the phosphorus-containing compound semiconductor layer.

29. The light emitting device as claimed in Claim 28, wherein the phosphorus-blocking layer is composed of a phosphorus-free compound semiconductor.

30. The light emitting device as claimed in Claim 29, wherein the phosphorus-blocking layer is composed of AlGaAs.

31. The light emitting device as claimed in Claim 28, wherein the bonding-side semiconductor layer comprises the second-conductivity-type cladding layer; an auxiliary compound semiconductor layer configured as the phosphorus-containing compound semiconductor layer using a compound semiconductor having a composition different from that of the second-conductivity-type cladding layer, and disposed so as to contact with the oxide transparent electrode layer side of the second-conductivity-type cladding layer; and the phosphorus-blocking layer disposed between the auxiliary compound semiconductor layer and the electrode contact layer.

32. The light emitting device as claimed in Claim 29, wherein the auxiliary compound semiconductor layer is composed of GaP.

33. The light emitting device as claimed in Claim 31, wherein a portion of the bonding-side semiconductor layer including the interface with the electrode contact layer is configured as an intermediate layer having a band gap energy smaller than that of the bonding-side semiconductor layer portion in contact with the portion from the side opposite to the electrode contact layer, but larger than that of the electrode contact layer, the intermediate layer being configured as the phosphorus-blocking layer.

34. The light emitting device as claimed in Claim 33, wherein the intermediate layer is composed of AlGaAs.

35. The light emitting device as claimed in Claim 28, wherein the bonding-side semiconductor layer comprises the second-conductivity-type cladding layer; and an auxiliary compound semiconductor layer configured as the phosphorus-blocking layer using a compound semiconductor having a composition different from that of the second-conductivity-type cladding layer, and disposed so as to contact with the oxide transparent electrode layer side of the second-conductivity-type cladding layer; and the electrode contact layer is disposed in contact with the auxiliary compound semiconductor layer.

36. The light emitting device as claimed in Claim 35, wherein the auxiliary compound semiconductor layer is composed of AlGaAs.

37. The light emitting device as claimed in Claim 31, wherein the auxiliary compound semiconductor layer is a cushion layer composed of a compound semiconductor having a dopant concentration lower than that of the second-conductivity-type cladding layer.

38. The light emitting device as claimed in Claim 28, wherein the bonding-side semiconductor layer has the second-conductivity-type cladding layer having a thickness of 0.6 μm or above and less than 10 μm, the second-conductivity-type cladding layer being configured as the phosphorus-containing compound semiconductor layer; and the phosphorus-blocking layer is disposed so as to contact with the second-conductivity-type cladding layer.

39. The light emitting device as claimed in Claim 38, wherein the phosphorus-blocking layer is configured as an intermediate layer having a band gap energy smaller than that of the second-conductivity-type cladding layer but larger than that of the electrode contact layer.

40. The light emitting device as claimed in Claim 39, wherein the second-conductivity-type cladding layer is composed of AlGaInP, and the intermediate layer is composed of AlGaAs.

41. A method of fabricating a light emitting device which comprises a light emitting layer portion composed of a compound

semiconductor, and has a double heterostructure in which a first-conductivity-type cladding layer, an active layer and a second-conductivity-type cladding layer are stacked in this order; and an oxide transparent electrode layer covering the main surface of the second-conductivity-type cladding layer, and provided for applying therethrough emission drive voltage to the light emitting layer portion; comprising the steps of:

forming a bonding-side semiconductor layer, being a compound semiconductor layer including the second-conductivity-type cladding layer, so as to have a dopant concentration of $4\times10^{16}/cm^3$ or above and less than $1\times10^{18}/cm^3$, and a thickness of 0.6 μm or above and less than 10 μm, on the active layer of the light emitting layer portion;

forming an electrode contact layer composed of a compound semiconductor, and provided for reducing junction resistance of the oxide transparent electrode layer, on the bonding-side semiconductor layer;

forming the oxide transparent electrode layer so as to contact with the electrode contact layer and to cover the main surface of the second-conductivity-type cladding layer;

forming a bonding pad composed of a metal on the oxide transparent electrode layer; and

bonding an electrode wire for current supply to the bonding pad;

where these steps are sequentially carried out in this order.

42. A light emitting device comprising a light emitting layer

portion composed of compound semiconductor layers, and an oxide transparent electrode layer for supplying emission drive voltage to the light emitting layer portion, and is configured so as to extract the light from the light emitting layer portion through the oxide transparent electrode layer, further comprising:

a bonding pad composed of a metal and disposed on the oxide transparent electrode layer, and having an electrode wire for current supply bonded thereto;

an electrode contact layer for reducing junction resistance of the oxide transparent electrode layer disposed between the light emitting layer portion and the oxide transparent electrode layer so as to contact with the oxide transparent electrode layer, allowing a formation region and a non-formation region of the electrode contact layer to be interlaced at the junction interface with the oxide transparent electrode layer; and

an Al-containing interposed layer containing Al disposed between the electrode contact layer and the light emitting layer portion so as to extend over the formation region and the non-formation region of the electrode contact layer, the Al-containing interposed layer comprising an Al-containing compound semiconductor layer in contact with the electrode contact layer in the formation region of the electrode contact layer, and an Al-base insulating layer formed selectively in the non-formation region of the electrode contact layer, and composing at least the outermost portion on the oxide transparent electrode layer side.

43. The light emitting device as claimed in Claim 42, wherein the electrode contact layer is composed of a compound semiconductor or a metal.

44. The light emitting device as claimed in Claim 42, wherein the light emitting layer portion is composed of AlGaInP, and is configured as having a double heterostructure in which a first-conductivity-type cladding layer, an active layer and a second-conductivity-type cladding layer are stacked in this order.

45. The light emitting device as claimed in Claim 42, wherein the junction interface with the oxide transparent electrode layer has a primary region right under the bonding pad and the residual secondary region, and the primary region has a larger ratio of formation area of the non-formation region of the electrode contact layer than the secondary region has.

46. The light emitting device as claimed in Claim 45, wherein the entire portion of the primary region is configured as the non-formation region of the electrode contact layer, and the Al-base insulating layer is formed over the entire portion of the non-formation region.

47. The light emitting device as claimed in Claim 44, wherein

the formation region and non-formation region of the electrode contact layer are interlaced in the secondary region, and the Al-base insulating layer is formed over the entire portion of the non-formation region.

48. The light emitting device as claimed in Claim 47, wherein the electrode contact layer is composed of a compound semiconductor or a metal in the secondary region.

49. The light emitting device as claimed in Claim 42, wherein the oxide transparent electrode layer is an ITO electrode layer, the electrode contact layer is composed of a phosphorous-free compound semiconductor, a phosphorus-containing compound semiconductor layer is disposed in contact with the Al-containing interposed layer on the side opposite to that the oxide transparent electrode layer is located, and the Al-containing interposed layer is configured as a phosphorus-blocking layer having a band gap energy larger than that of the electrode contact layer, and having a phosphorus content lower than that of the phosphorus-containing compound semiconductor layer.

50. The light emitting device as claimed in Claim 49, wherein the phosphorus-blocking layer is composed of a phosphorus-free compound semiconductor.

51. The light emitting device as claimed in Claim 50, wherein the phosphorus-blocking layer is composed of AlGaAs.

52. The light emitting device as claimed in Claim 49, wherein the light emitting layer portion is composed of a compound semiconductor and has a double heterostructure in which a first-conductivity-type cladding layer, an active layer and a second-conductivity-type cladding layer are stacked in this order;

the bonding pad has the electrode wire for current supply bonded thereon;

a bonding-side semiconductor layer, which is defined as a compound semiconductor layer including the second-conductivity-type cladding layer disposed between the active layer and the electrode contact layer, has a thickness of 0.6 μm or above and less than 10 μm; comprises a first layer including at least an interface with the electrode contact layer and a second layer located between the first layer and the active layer; a portion of the second layer including at least the interface with the first layer being configured as a phosphorus-containing compound semiconductor layer containing phosphorus; and the first layer being configured as the phosphorus-blocking layer.

53. The light emitting device as claimed in Claim 52, wherein the bonding-side semiconductor layer comprises the second-conductivity-type cladding layer; a cushion layer disposed so as to contact with the ITO electrode layer side of the second-conductivity-type cladding layer, and configured as the phosphorus-containing compound semiconductor layer composed of a

compound semiconductor having a composition different from that of the second-conductivity-type cladding layer; and the phosphorus-blocking layer disposed between the cushion layer and the electrode contact layer.

54. The light emitting device as claimed in Claim 53, wherein the cushion layer is composed of GaP.

55. The light emitting device as claimed in Claim 53, wherein a portion of the bonding-side semiconductor layer including the interface with the electrode contact layer is configured as an intermediate layer having a band gap energy smaller than that of the bonding-side semiconductor layer portion in contact with the portion from the side opposite to the electrode contact layer, but larger than that of the electrode contact layer, the intermediate layer being configured as the phosphorus-blocking layer.

56. The light emitting device as claimed in Claim 55, wherein the light emitting layer portion is composed of AlGaInP, and the intermediate layer is composed of AlGaAs.

57. The light emitting device as claimed in Claim 52, wherein the bonding-side semiconductor layer comprises the second-conductivity-type cladding layer; and a cushion layer disposed so as to contact with the oxide transparent electrode layer side of the

second-conductivity-type cladding layer, and configured as the phosphorus-blocking layer composed of a compound semiconductor having a composition different from that of the second-conductivity-type cladding layer; and the electrode contact layer is disposed so as to contact with the cushion layer.

58. The light emitting device as claimed in Claim 57, wherein the cushion layer is composed of AlGaAs.

59. The light emitting device as claimed in Claim 53, wherein the cushion layer is composed of a compound semiconductor having a dopant concentration lower than that of the second-conductivity-type cladding layer.

60. The light emitting device as claimed in Claim 52, wherein the bonding-side semiconductor layer has the second-conductivity-type cladding layer having a thickness of 0.6 μm or above and less than 10 μm, the second-conductivity-type cladding layer being configured as the phosphorus-containing compound semiconductor layer, and the phosphorus-blocking layer is disposed so as to contact with the second-conductivity-type cladding layer.

61. The light emitting device as claimed in Claim 60, wherein the phosphorus-blocking layer is configured as an intermediate layer having a band energy smaller than that of the second-conductivity-type

cladding layer, but larger than that of the electrode contact layer.

62. The light emitting device as claimed in Claim 61, wherein the second-conductivity-type cladding layer is composed of AlGaInP, and the intermediate layer is composed of AlGaAs.

63. A method of fabricating a light emitting device which comprises a compound semiconductor layer having a light emitting layer portion, and an Al-base insulating layer formed on at least either one of the main surface of the compound semiconductor layer so as to selectively cover a partial region of the main surface, comprising:

a compound semiconductor layer growing step for growing the compound semiconductor layer in which an Al-containing compound semiconductor layer and an Al-free compound semiconductor layer are grown on the surficial portion of the compound semiconductor layer so as to dispose the Al-free compound semiconductor layer on the outermost side; and

a selective etching step in which a partial region of the Al-free compound semiconductor layer is patterned by chemical etching while using the Al-containing compound semiconductor layer as an etching stop layer, and at the same time at least the surficial portion of the Al-containing compound semiconductor layer exposed in the removal portion of the Al-free compound semiconductor layer is allowed to react with an etching solution used for the chemical etching to thereby form the Al-base insulating layer.

64. The method of fabricating a light emitting device as claimed in Claim 63, wherein the Al-containing compound semiconductor layer is composed of AlGaAs, the Al-free compound semiconductor layer is composed of GaAs, and the etching solution is an ammonium/hydrogen peroxide mixed solution.